

Appl. No. 10/709,511
Amendment dated October 9, 2006
Docket No. 7945-1

Amendments to the Claims:

What is claimed is:

1. (Currently Amended) An antenna structure comprised of:
a multifilar helix antenna etched on a flexible substrate; and
substantially parallel and substantially concentric metallic rings positioned around the longitudinal axis of the helix antenna and along at least one of a total length or a partial length of the helix antenna, wherein the substantially concentric metallic rings are parasitically coupled and permanently fixed to the multifilar helix antenna.
2. (Currently Amended) The antenna structure of claim 1 where the ~~helix antenna is a multifilar helix antenna~~ substantially parallel and substantially concentric metallic rings are closed looped metallic rings.
3. (Cancelled) ~~The antenna structure of claim 1 where the helix antenna is a standard monofilar helix antenna.~~
4. (Currently Amended) The antenna structure of claim 1 where the ~~helix antenna~~ substantially parallel and substantially concentric metallic rings are [is] etched on a flexible substrate.
5. (Currently Amended) The antenna structure of claim 1 where at least one of the metallic rings are etched on the same substrate as the multifilar helix antenna.
6. (Currently Amended) The antenna structure of claim 1 where at least one of the metallic rings are etched on a different substrate than that of the multifilar helix antenna.
7. (Currently Amended) The antenna structure of claim 1 where the metallic rings are part of a radome that houses the multifilar helix antenna.

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8. (Previously Presented) The antenna structure of claim 1 where at least one of the metallic rings is an open ended metallic loop.
9. (Previously Presented) The antenna structure of claim 1 where at least one of the metallic rings is connected to at least one other ring.
10. (Previously Presented) The antenna structure of claim 1 where at least one of the rings or loops is electrically connected to at least one antenna helical element.
11. (Previously Presented) A method for reducing the height of a helix antenna by using substantially parallel and substantially concentric metallic parasitic rings positioned around the longitudinal axis of the helix antenna and along at least one of a total length or a partial length of the helix antenna.
12. (Currently Amended) A method for tuning a multifilar helix antenna by using substantially parallel and substantially concentric metallic parasitic rings that are permanently fixed to a plurality of helices of the multifilar helix antenna and that are positioned around the longitudinal axis of the helix antenna and along at least one of a total or a partial length of the helix antenna.
13. (Previously Presented) The antenna structure of claim 1, where the helix antenna is a quadrifilar helix antenna.
14. (Previously Presented) The antenna structure of claim 8, where the open ended metallic loop is formed from one or more open ended rings.
15. (Cancelled) ~~The antenna structure of claim 8, where the open ended metallic loop includes overlapping rings.~~

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16. (Currently Amended) An antenna structure comprised of:

a mast-type multifilar helix antenna; and
substantially parallel and substantially concentric closed loop metallic rings positioned around the longitudinal axis of the mast-type multifilar helix antenna and along at least one of a total length or a partial length of the antenna, wherein the substantially concentric closed loop metallic rings are parasitically coupled to the mast-type multifilar helix antenna.

17. (Currently Amended) The antenna structure of claim 16, where the mast-type multifilar antenna is a quadrifilar helix antenna.